

Date: Sun, 10 Oct 93 04:30:45 PDT  
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>  
Errors-To: Ham-Homebrew-Errors@UCSD.Edu  
Reply-To: Ham-Homebrew@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Homebrew Digest V93 #70  
To: Ham-Homebrew

Ham-Homebrew Digest                      Sun, 10 Oct 93                      Volume 93 : Issue    70

Today's Topics:

aaaaaaaaarrrrrgggghhhh!  
Outstanding technical competence.  
Project 10: A BFO for your \$40 SW rcvr  
Project 10: A BFO for your \$40 SW rec.  
Soldering silliness

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>  
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 8 Oct 93 16:31:45 EDT  
From: psinnntp!arrl.org@uunet.uu.net  
Subject: aaaaaaaarrrrrgggghhhh!  
To: ham-homebrew@ucsd.edu

In rec.radio.amateur.homebrew, davidc@lsid.hp.com (David Cook) writes:

>> Douglas J Renze (drenze@icaen.uiowa.edu) wrote:

>>

>> It'd been a while since I'd soldered anything...

>>

>> \*sigh\*

>>

>> I guess there's a lesson in there somewhere.

>>

>> Anybody know a good use for a patch cord?

> ...reminds me of the mistake I seem to make over and over.

>

> I solder the new jack to the end of the cord. Beautiful job. Never done  
> better. Then I discover that I forgot to slip the little cover that's  
> supposed to get put over the connections onto the cord first. Why can't  
> I remember?

Yeah, and I have a similar problem with certain marital aids. \*sigh\*

CUL es 73 de BB

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*****
Brian Battles, WS10      I Tel      203-666-1541, ext 222 I  "Radio amateurs
QST Features Editor     I Fax      203-665-7531          I  do it with high
ARRL HQ                 I Internet bbattles@arrl.org      I  frequency"
Newington, CT USA       I Amprnet  ws1o@ws1o.ampr.org [44.88.0.87]
*****

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COMMENTS EXPRESSED HEREIN ARE MY OWN PERSONAL REMARKS AND ARE NOT TO BE  
CONSIDERED OFFICIAL ARRL VIEWS OR POLICY..

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Date: 8 Oct 93 16:35:47 EDT  
From: psinntp!arrl.org@uunet.uu.net  
Subject: Outstanding technical competence.  
To: ham-homebrew@ucsd.edu

In rec.radio.amateur.homebrew, wa2ise@netcom.com (Robert Casey) writes:  
>>I solder the new jack to the end of the cord. Beautiful job. Never done  
>>better. Then I discover that I forgot to slip the little cover that's  
>>supposed to get put over the connections onto the cord first. Why can't  
>>I remember?

>Think it might be a requirement by the FCC that every ham must make this  
>mistake at least once in his career.           :-)

Say, does this mean I get extra credit? I've done it at least a dozen  
times! (Earphone cable, several kinds of coax, mike cables, patch cords,  
etc.) You see what 15+ years of experience in Amateur Radio, broadcasting  
and professional recording can offer? Lots of challenging opportunities  
to screw up!

CUL es 73 de BB

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*****
Brian Battles, WS10      I Tel      203-666-1541, ext 222 I  "Radio amateurs
QST Features Editor     I Fax      203-665-7531          I  do it with high

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ARRL HQ           I Internet  bbattles@arrl.org      I           frequency"
Newington, CT USA I Amprnet   ws10@ws10.ampr.org [44.88.0.87]
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COMMENTS EXPRESSED HEREIN ARE MY OWN PERSONAL REMARKS AND ARE NOT TO BE  
CONSIDERED OFFICIAL ARRL VIEWS OR POLICY..

Date: Sat, 9 Oct 1993 22:44:53 GMT  
From: news.Hawaii.Edu!uhunix3.uhcc.Hawaii.Edu!jherman@ames.arpa  
Subject: Project 10: A BFO for your \$40 SW rcvr  
To: ham-homebrew@ucsd.edu

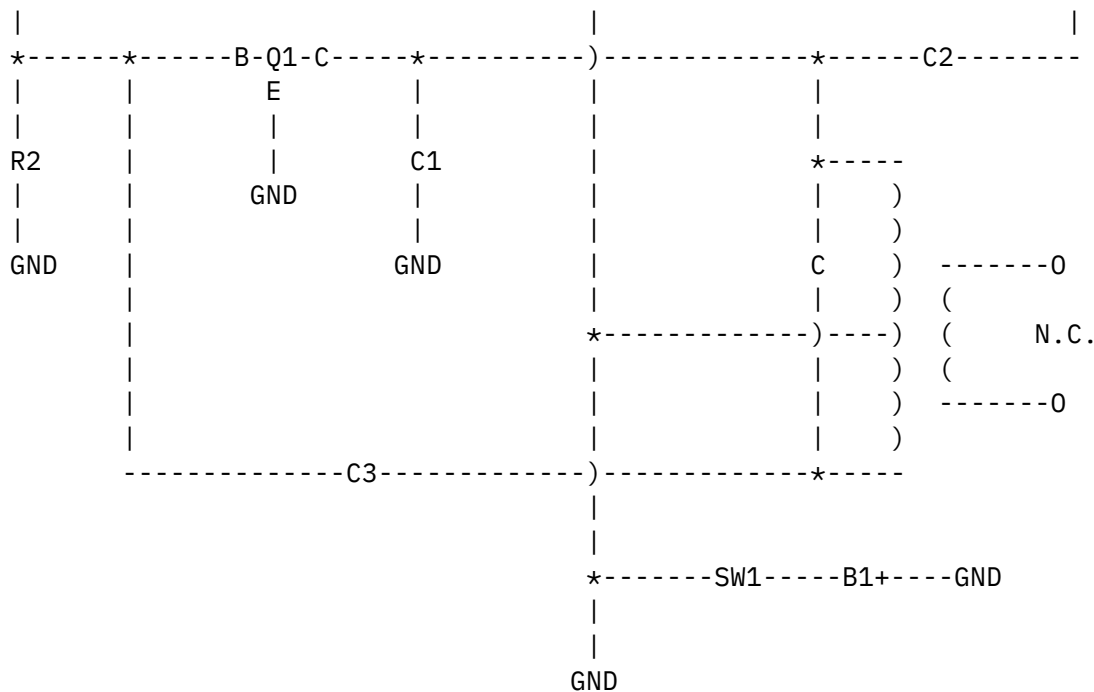
It seems there are quite a few cheapie shortwave receivers out there that have everything (synthesizer tuning, digital readout, fairly good specs) but lack the all important BFO to copy SSB and CW. Well, let's remedy that problem right now. The heart of this project is a 455 kHz IF transformer: go to your closest junked broadcast radio receiver and steal one from there.

If you are reading this on [rec.radio.shortwave](http://rec.radio.shortwave) you may skip this paragraph; if you are reading this on [rec.radio.amateur.homebrew](http://rec.radio.amateur.homebrew) or on the QRP mailgroup here's a neat idea: get one of these cheapie SW rcvrs and after installing this BFO you'll have a great companion to any of the simple transmitters I've been posting! Let's face it, xmtrs are easy to build, but rcvrs certainly require more care; for \$40 you can pick up one of these synthesized digital readout pups and have a complete backpack transmitter-receiver pair.

## PARTS LIST

- |      |                             |
|------|-----------------------------|
| Q1   | 2N544 transistor            |
| C1   | 15 pfd variable capacitor   |
| C2   | .001 mfd                    |
| C3,4 | .01 mfd                     |
| R1   | 7.5K resistor               |
| R2   | 5.1K                        |
| B1   | 1.5 VDC battery             |
| T1   | Miller #9-C2 IF transformer |
| SW1  | SPST switch                 |

	ANT
R1	



Recall: Q1 is marked B=base, C=collector, E=emitter; the case of Q1 MUST be grounded; GND=ground; note the polarity of B1. Now, the unmarked capacitor, C, and its associated transformer, are inside the can of the IF transformer; if you remove the can you'll see where to make the connections. N.C. means not connected - while you have the can off you'll have to cut those leads. Also, screw the tuning screw slug all the way out. After you've put everything together set C1 about midway. Adjust the transformer slug until it resonates at 455 kHz, which can be accomplished using a receiver or GDO. AS you tune the slug (using the receiver) you should hear the heterodyne note of the BFO lowering in pitch until it eventually zero-beats. Stop tuning at this point. The BFO antenna can be any piece of hookup wire wrapped around the antenna wire near (or even inside of) the receiver. Whenever you want to copy CW or SSB, merely flick on SW1.

Jeff NH6IL

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Date: Fri, 8 Oct 1993 22:02:35 GMT  
From: news.Hawaii.Edu!uhunix3.uhcc.Hawaii.Edu!jherman@ames.arpa  
Subject: Project 10: A BFO for your \$40 SW rec.  
To: ham-homebrew@ucsd.edu

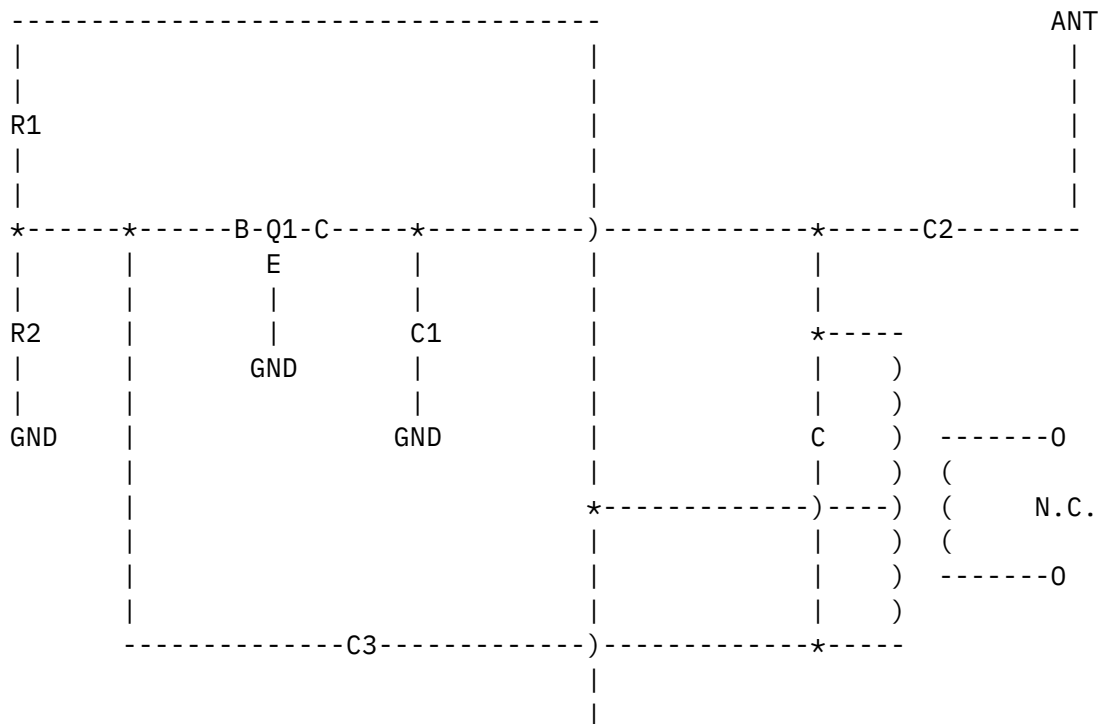
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problem right now. The heart of this project is a 455 kHz IF transformer: go to your closest junked broadcast radio receiver and steal one from there.

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## PARTS LIST

Q1	2N544 transistor
C1	15 pfd variable capacitor
C2	.001 mfd
C3,4	.01 mfd
R1	7.5K resistor
R2	5.1K
B1	1.5 VDC battery
T1	Miller #9-C2 IF transformer
SW1	SPST switch



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      *-----SW1-----B1+----GND
      |
      |
      GND

```

Recall: Q1 is marked B=base, C=collector, E=emitter; the case of Q1 MUST be grounded; GND=ground; note the polarity of B1. Now, the unmarked capacitor, C, and its associated transformer, are inside the can of the IF transformer; if you remove the can you'll see where to make the connections. N.C. means not connected - while you have the can off you'll have to cut those leads. Also, screw the tuning screw slug all the way out. After you've put everything together set C1 about midway. Adjust the transformer slug until it resonates at 455 kHz, which can be accomplished using a receiver or GDO. AS you tune the slug (using the receiver) you should hear the heterodyne note of the BFO lowering in pitch until it eventually zero-beats. Stop tuning at this point. The BFO antenna can be any piece of hookup wire wrapped around the antenna wire near (or even inside of) the receiver. Whenever you want to copy CW or SSB, merely flick on SW1.

Jeff NH6IL

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Date: 8 Oct 93 16:26:24 EDT  
From: psinntp!arrl.org@uunet.uu.net  
Subject: Soldering silliness  
To: ham-homebrew@ucsd.edu

In rec.radio.amateur.homebrew, drenze@icaen.uiowa.edu (Douglas J Renze) writes:

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>
>It'd been a while since I'd soldered anything...so I decided to shorten the
>cord of the earplug I use with my HT...it was a bit too long, and the plug
>needed replacing anyway. So I chop it off and solder the new jack to the
>end of the cord, right? Beautiful job. Never done better, if I do say so
>myself.
> I let it cool, then get ready to check it out. I plug the jack into
>the HT, run my finger up the cord to pull over the earplug...and come up
>against the jack I'd just trimmed off the end of the cord.
>
>*sigh*

```

Wow! As a dyed-in-the-wool 10-thumbed appliance operator type, I'm always amazed at how you high-tech guys think things up--imagine, solder two wires and >BINGO< ... a full-duplex earphone cable!

Or if you plug one end into the audio out jack and one into the mike in jack, does it make the radio a closed-circuit repeater?

Patent it quick, Man!

CUL es 73 de BB

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End of Ham-Homebrew Digest V93 #70

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